

## Princeton University

### Princeton Plasma Physics Laboratory

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To Whom It May Concern:

I'm writing this letter to express strong support for the SciDAC Visualization and Analytics Center for Enabling Technology (VACET) in their upcoming program review. I am writing as the Principal Investigator for the Center for Extended Magnetohydrodynamic Modeling (CEMM). In this role, our team is responsible for understanding the mechanisms that lead to disruptive and other stability limits in burning plasma experiments such as ITER.

The VACET Center has had a positive impact on our project by supporting our team as we move towards utilizing VisIt as our primary visualization and analysis tool. Their ability to provide tutorials on using VisIt not only at meetings such as the SciDAC PI meeting but also on site here at PPPL have been invaluable in allowing us to effectively utilize VisIt.

Their ongoing work on tools for topological analysis will help us better identify instabilities in the plasma flow which is critical to understanding the nature of tokamak experiment design. This is especially true as we move towards petascale computing and need to rely on tools that can automatically identify these instabilities. The quality of the initial analysis tool has generated interest not only within our group but within other fusion SciDACs as well that are headed by Don Batchelor and Bill Nevins . It has even been featured in a book, The Plasma Universe, by Amitava Bhattacharjee.

In addition, they have been collaborating with us to deploy tools to enable comparative analysis between our two simulation codes, M3D and NIMROD. When deployed, these tools will help us with our verification and validation efforts which are critical to the success of our project.

In summary, VACET is a valuable asset to the scientific community and we look forward to our continued collaboration.

Sincerely,

Stephen C. Jardin

Director, SciDAC Center for Extended Magnetohydrodynamic Modeling (CEMM)

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